



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

PR

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

QM12/0802

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AIR MAIL

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/380,340	11/29/99	006	POTHIER, D	3764 08/02/01
First Named Applicant	DOYLE,	35 USC 154(b) term ext. = 0 Days.		

TITLE OF INVENTION HINGE MECHANISM FOR A LIMB PROTECTOR

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3	602-026.800	K07	UTILITY	YES	\$620.00	11/02/01

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above.  
If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

If the SMALL ENTITY is shown as NO:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

A. Pay FEE DUE shown above, or

B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.  
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

PATENT AND TRADEMARK OFFICE COPY

**Notice of Allowability**

Application No.

09/380,340

Examiner

Denise Pothier

Applicant(s)

DOYLE, KELVIN

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07-19-01.
2. ☒ The allowed claim(s) is/are 10-15.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. 10.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>11</u> |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input type="checkbox"/> Examiner's Amendment/Comment                                |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance    |
|  | 9 <input type="checkbox"/> Other   |

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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kelvin Doyle on July 19 and 26, 2001.

2. The application has been amended as follows:

In the Specification

On page 1, after the line beginning with "Title of the Invention" insert – Related Applications – and page 1, line 5, delete "Related Applications."

On page 13, after line 512, insert – I claim: --.

Please replace the Abstract with the following:

-- A brace or limb protector, which in hinging, matches the complex bending motion of the natural knee of a human being. The hinge mechanism has supports for the upper and lower leg which are attached to each other by a hinging mechanism which is connected to and pivots on the support at a first position (50) and a second position (72) respectively. Connection of the supports at the first position (50) is to the plate of the hinge mechanism and at the second position (72) to the arm which pivots on the plate at stud (61). This configuration of the hinging system allows the hinge

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mechanism of the brace or limb protector to follow the natural movements of the human knee at all degrees of natural movement. --

In the Claims

Cancel claims 1-9.

Please add the following claims.

10. A knee brace including:

(a) a first and second support members, the first and second support members adapted to engage a leg on either side of a knee joint; and

(b) a hinge mechanism comprising:

(i) a base plate having a recessed portion bounded by radial walls and

(ii) a swivel arm having a first and second end, the first end of the arm located in the recessed portion, wherein the first support member pivotally connects to the base plate, the first end of the arm pivotally rotates against the plate about an axis substantially perpendicular thereto in the recessed portion and a means for pivotally connecting the second end of the arm to the second support member about an axis substantially perpendicular to the base plate and further wherein the second support member has an arcuate slot and the arm has a post for engaging the arcuate slot to limit pivotal movement of the second support member with respect to the arm, such that the swivel arm, the post, the

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arcuate slot and the radial walls restrict the degree of angular rotation of the first and second support members.

<sup>2</sup>  
11. A knee brace according to claim <sup>1</sup>~~10~~, wherein the swivel arm is mounted rotationally on a circular boss on the base plate and the first support member has a stop member formed thereon restricting the movement of the arm.

<sup>3</sup>  
12. A knee brace according to claim <sup>1</sup>~~10~~, wherein a tab is on the base plate and a second arcuate slot is in the first support member.

<sup>4</sup>  
13. A knee brace according to claim <sup>3</sup>~~12~~, wherein the angular rotation of the first and second support members is restricted by the passage of the post along the arcuate slot and the tab along the second arcuate slot.

<sup>5</sup>  
14. A knee brace according to claim <sup>4</sup>~~13~~, further including at least one spacer inserted into the arcuate slot or the second arcuate to limit the degree of rotation.

<sup>6</sup>  
15. A knee brace according to claim <sup>1</sup>~~10~~, wherein the first and second support members are made of rigid reinforced material.

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3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: see attached Figure 2 with changes shown in red. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

#### 4. INFORMATION ON HOW TO EFFECT DRAWING CHANGES

##### 1. Correction of Informalities -- 37 CFR 1.85

New formal drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

##### 2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

#### Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.185(a). Failure to take corrective action within the set (or extended) period will result in **ABANDONMENT** of the application.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise M. Pothier whose telephone number is 703.308.0993. The examiner can normally be reached on Monday-Thursday and alternate Fridays. The fax phone numbers for the organization where this application or proceeding is assigned are 703.308.3580 for regular communications and 703.308.3580 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Everett Williams whose telephone number is 703.305.1708.

  
Denise Pothier  
July 27, 2001